

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 77-145

WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF BENICIA
BENICIA MARINA
SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. City of Benicia, hereinafter called the discharger, submitted a report of waste discharge dated August 10, 1977.
2. The discharger proposes to create and operate a 15 acre, 309 berth marina and to construct an adjacent 18.6 acre marsh located at the Benicia waterfront between Point Benicia and East Fifth Street in the City of Benicia. The discharger proposes to excavate some 230,000 cubic yards of fill from the proposed marina basin for confined non-wetland disposal. In addition, 120,000 cubic yards of fill and bay mud will be excavated by clamshell from the marina entry channel and basin for disposal by bottom dump barge to S. F. Disposal Site 9, Carquinez Strait or S.F. Disposal Site II, at Alcatraz. Of this total, approximately 100,000 cubic yards will be taken from areas which are presently behind dikes as shown in Attachment A which is incorporated herein and made a part of this Order.
3. The marina complex will include restaurants, marina-related commercial development, harbormaster's office, three public rest-rooms, pumpout facilities for vessel wastes, and an adjacent 18.6 acre shoreline marsh area. The proposed marsh will consist of a western and eastern area with the latter area having one controlled entrance located in the marina entrance channel as shown in Attachment A.
4. The discharger has submitted marina water quality maintenance and marsh development and maintenance plans to provide for the control of nutrient and floatable related water quality nuisance problems in the proposed 15 acre marina. The plans provide for a controlled gate between the marsh and the marina entrance channel to direct the water flow into or from the 2000 foot marsh channel. A bar screen equipped with a screening device at the marina gate will collect floatables in either direction of flow. The management plan calls for controlled circulation of marina waters during all periods of the year to provide the desired residence time and to remove a necessary portion of the available nutrients.
5. The City of Benicia has prepared a final Environmental Impact Report dated October 23, 1975, in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq). The project as approved by the City of Benicia will have the following significant effects on the environment.

- a. New project dredging and maintenance dredging will temporarily degrade water quality.
 - b. The concentration of floatables and nutrients may act to degrade water quality within the marina.
 - c. A long term affect of the construction of the breakwater will cause minor shoaling upstream and downstream of that structure.
 - d. Short-term adverse impacts on the surrounding neighborhood will result from construction noise.
6. The discharge Prohibitions, Water Quality Limitations, and Provisions of this Order mitigate or avoid the adverse environmental impacts listed in 5.a and 5.b above.
7. The following changes or alterations which could mitigate or avoid the significant effects on the environment identified in 5.c. and 5.d. above are within the responsibility and jurisdiction of another public agency and such changes can and should be adopted by such other agency. Such changes or alterations are as follows:
- a. Impacts related to shoaling may be minimized by good engineering techniques and careful supervision of construction by Benicia City staff and the project engineer.
 - b. Construction impacts should be mitigated by noise control equipment on all equipment used.
8. The Board adopted the Water Quality Control Plan for San Francisco Bay Basin on April 15, 1975, containing water quality objectives for Suisun Bay and contiguous waters. The beneficial uses of Suisun Bay and contiguous waters as set forth in the Basin Plan are:
- a. Recreation
 - b. Navigation
 - c. Fish migration and habitat
 - d. Habitat and resting for water fowl, migratory birds and certain rare and endangered species
 - e. Industrial water supply and process water
 - f. Commercial and sport fishing
9. The discharger has provided the following:
- a. Sediment testing results which show that the old bay mud to be excavated from the basin would be acceptable for disposal at the Carquinez or Alcatraz Disposal Site under current dredge spoil disposal criteria.
 - b. Evidence which relates that there is no economically feasible upland disposal site available and that the project would be seriously jeopardized if any additional funding is requested this fiscal year.

10. The Board finds that the adverse environmental impacts of disposal of excavated material in Carquinez Strait or at the Alcatraz disposal site are outweighed by the positive impacts of creation of 18.6 acres of marshland and the addition of some 15 acres of new open water surface.
11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, to achieve the water quality objectives and prohibitions in the Water Quality Control Plan that the discharger shall comply with the following:

A. Dredging and Spoil Disposal Specifications

1. The dredging, treatment or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The dredging operation shall not cause:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam in waters of the State at any place more than 100 feet from the clamshell dredge;
 - b. Bottom deposits or aquatic growths in waters of the State at any place;
 - c. Deleterious alteration of apparent color beyond present natural background levels in waters of the State at any place;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place.
3. Disposal of dredge spoil and excavated material to Carquinez Strait or near Alcatraz shall be subject to the following limitations:
 - a. The total amount shall not exceed 120,000 cubic yards, of which not more than 100,000 cubic yards shall consist of historical bay mud excavated from areas presently behind dikes as shown in Attachment A.
 - b. All material shall be unpolluted by current dredge spoil disposal criteria.
 - c. Disposal at Carquinez shall be limited to the months of December, January, and February.
4. Dredging other than by conventional clamshell equipment is prohibited.

B. Water Quality Limitations for the Benicia Marina

1. The application of copper or other conservative toxicants to control growth of algae or aquatic plants is prohibited.
2. Adequate circulation and mixing, or other methods of water quality management, shall be provided so as to maintain the following levels of water quality at all points within the marina:
 - a. Dissolved Oxygen 5.0 mg/l minimum. Annual median -- 80% saturation
 - b. pH Variation from ambient pH within the adjacent waters of Carquinez Strait by no more than 0.5 pH units.
 - c. Chlorophyll "a" 50 µg/l maximum. When concentration of chlorophyll "a" in the adjacent Carquinez Strait exceed this, the concentrations within the marina shall be not more than 20 percent above river concentrations.
 - d. No visible, floating, suspended or deposited oil or other products of petroleum origin.
3. Water quality within the marina shall be managed so as to prevent the presence of toxic or other deleterious substances in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving water or as a result of biological concentration.
4. Discharge of sewage or other wastes to waters of the State is prohibited.

C. Provisions

1. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program as directed by the Executive Officer.
2. The discharger shall file with the Board a report on waste discharge at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge.
3. The discharger shall permit the Regional Board:
 - a. Entry upon premises in which an effluent source is located or in which any required records are kept,
 - b. Access to copy any records required to be kept under terms and conditions of this Order,
 - c. Inspection of monitoring equipment or records, and
 - d. Sampling of any discharge.

4. The discharger shall maintain in good working order and operate efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.
5. In the event the discharger is unable to comply with any of the conditions of this Order due to:
 - a. Breakdown of waste treatment equipment;
 - b. Accidents caused by human error or negligence; or
 - c. Other causes such as acts of nature,

the discharger shall notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

6. Collected screening, sewage and other wastes shall be disposed of at a legal point of disposal, and in accordance with the provisions of Division 7.5 of the California Water Code. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been prescribed by a regional water quality control board and which is in full compliance therewith.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 15, 1977.

FRED H. DIERKER
Executive Officer

Attachments:

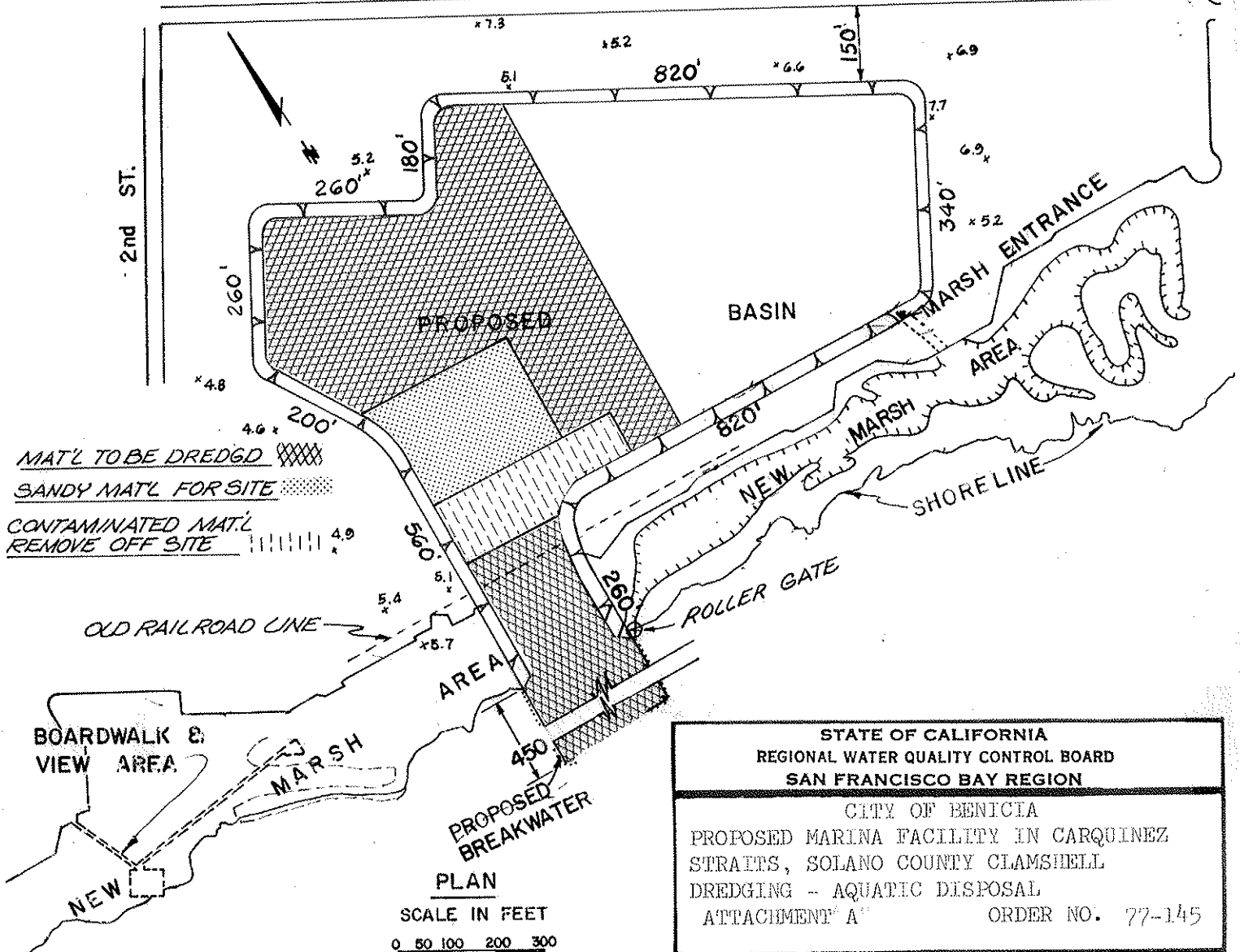
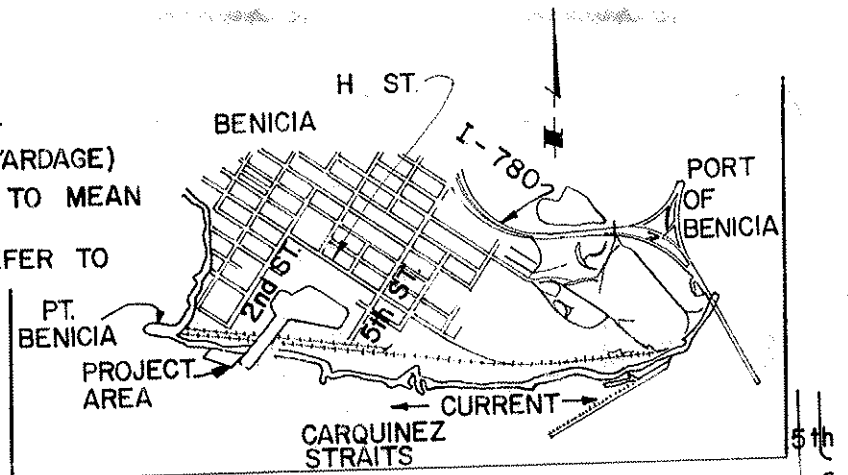
Map
Self-Monitoring Program

NOTE: APPROXIMATELY 350,000 C.Y. OF MATERIAL TO BE REMOVED. (TOTAL YARDAGE)
SOUNDINGS ARE IN FEET & REFER TO MEAN LOWER LOW WATER.

ALL GROUND ELEVATIONS SHOWN REFER TO MEAN LOWER LOW WATER.

APPROXIMATELY 120,000 C.Y. OF MATERIAL TO BE DREDGED AND BARGED TO CARQUINEZ AQUATIC DISPOSAL SITE.

(100,000 cy bay sediment only from inside Railroad line, and 20,000 cy from approach channel)



STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION		
CITY OF BENICIA PROPOSED MARINA FACILITY IN CARQUINEZ STRAITS, SOLANO COUNTY CLAMSHELL DREDGING - AQUATIC DISPOSAL ATTACHMENT "A" ORDER NO. 77-145		
DRAWN BY:	DATE:	DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Benicia Marina

City of Benicia

Solano County

NPDES NO. CA _____

ORDER NO. 77-145

CONSISTS OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Marina and Marsh Water

<u>Station</u>	<u>Description</u>
MA-1	At a point in the Benicia Marina at the marsh entrance.
MA-2	At a point in the Benicia Marina approximately 200 feet north of the marsh entrance and 200 feet west of the eastern edge of the marina.
MA-3	At a point in the Benicia Marina approximately 100 feet north of the marsh entrance and 700 feet west of the eastern edge of the marina.
MA-4	At a point in the eastern marsh at the control gate in the Benicia Marina entrance channel.
MA-5	At a point 1000 feet into the eastern marsh from Station MA-4.

B. Reference Station

<u>Station</u>	<u>Description</u>
R-1	At a point in Carquinez Strait 500 feet directly out from the breakwater.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 77-145.
2. Includes only the following paragraphs of Part A:
A., B., C.2., E.1., E.3., F.1., F.3.a, b, c, d, f, and F.4.
3. Has been ordered by the Executive Officer on November 15, 1977, and becomes effective immediately when the Benicia Marina is operational.

4. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachement:
Table I

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

SAMPLING STATIONS	(1) MA-1 to MA-5 & R-1								
	G	G							
Date of Sample	April 2 Sept 30	Oct 1 April 1							
Marsh Gate Operation Schedule									
Chlorophyll "a" (mg/l)	2W	M							
Dissolved Oxygen (mg/l)	2W ⁽²⁾	M ⁽²⁾							
Oil & Grease (mg/l)	M	3M							
Fecal Coliform (MPN/100 ml)	2W	M							
Total Coliform (MPN/100 ml)	2W	M							
Temperature Temperature °C	2W	M							

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample

FREQUENCY OF SAMPLING

2W = every 2 weeks

M = monthly

3M = every 3 months

1. Stations MA-1, MA-2, MA-3, and R-1 shall be sampled at a low slack tide. Stations MA-4 shall be sampled at a high slack tide when the gate is closed. Station MA-5 shall be sampled at a high slack tide.
2. Dissolved oxygen samples taken in the marina shall be collected before or at 8 a.m. at the surface and at one foot above the bottom of the marina. The surface sample at R-1 shall be taken concurrently.